CLAIMS (T34626)

What is claimed is:

- 1. A method of image filtering, comprising:
- (a) computing edge intensity and direction for each pixel in an image;
- (b) filtering said image with a filter which, for each pixel, smoothes in a direction parallel to the edge found in step (a) for said each pixel;
- (c) interpolating said image and said filtered image from step (b) wherein said interpolating at said each pixel depends upon said intensity found in step (a).
- 2. The method of claim 1, wherein:
 - (a) said computing of step (a) of claim 1 includes
 - (i) computing variations in pixel values for horizontal, vertical, and diagonals at said each pixel; and
 - (ii) computing edge direction and intensity from said variations of (i).
- 3. The method of claim 1, wherein:
- (a) said filter of step (b) of claim 1 for said each pixel is a rotation according to said edge direction of step (a) of claim 1 of a fixed filter.
- 4. The method of claim 1, wherein:
- (a) said filter of step (b) of claim 1 for said each pixel is a matrix which depends upon $r = d_x/d_y$ with d_x is a measure of variation in the x-direction at said each pixel and d_y is a measure of variation in the x-direction at said each pixel.
- 5. The method of claim 1, wherein:
 - (a) said image is a color channel of a color image.